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Original Communication

Sexual abuse of children. A comparative study of intra and extra-familial cases

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ABSTRACT

The existing data suggest that individuals experiencing intra-familial abuse are affected more significantly than those experiencing extra-familial abuse. This study aims to identify possible differences between these types of abuse.

A retrospective study was performed based on medico-legal reports related to children suspected of being sexually abused ($n = 1054$).

The results revealed that 40.2% of the suspected abuses were intra-familial and were significantly different than extra-familial cases with respect to the following: (a) the complainants were younger; (b) their relationship to the alleged abuser was closer; (c) the alleged abusers had higher rates of previous sexual abuse; (d) the suspected abuses were less intrusive physically; (e) there was less physical but more psychological violence; (f) the delay between the last abuse and the medico-legal examination was greater; and (g) there were fewer physical signs and DNA evidence (none in the great majority of cases).

These results highlight aspects of intra-familial abuse that have been identified as factors influencing the severity of its consequences – physically, these instances of abuse were less intrusive but psychologically they were more intrusive than extra-familial abuse. This justifies the use of different strategies in the diagnosis and support for victims within the family.

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1. Introduction

Child sexual abuse is considered one of the greatest threats to a child's well-being and safety. Preventing and dealing with this situation is no easy task. It requires a multidisciplinary approach, with great effort and coordination between the public administration, numerous professionals, families, victims and society in general.

Numerous studies^{1,2} and experience have demonstrated that abuse can take different shapes and have varying consequences, depending on whether the instances of abuse occur in an intra (IF) or extra-familial (EF) context. This lends itself to different degrees of difficulty in the detection and diagnosis of these cases and argues for different intervention strategies with the victims, abusers and their families, though the best interest of the child is paramount at all times.

With respect to the consequences, these differences seem to be related to the victim's (sex, age, personality, developmental level) and abuser's (closeness to the victim, patterns of deviant behaviors) characteristics, the circumstances of the incident (use of physical/verbal aggression), the type of abuse (degree of physical and psychological intrusion), its duration and frequency, and the reaction of the people most involved (family support system and professional help).²

The consequences tend to be more serious when the abuse occurs at a very young age, is continuous, associated with genital contact and accompanied by threats, and when the abuser is the father/stepfather or when there is no family support.³ For the most part, these characteristics are associated with IF abuse, implying that this situation could be the most serious.

Simultaneously, IF cases are generally incorporated into a situation of secrecy and low visibility, which promotes continued abuse and late disclosure by the child or discovery by the third person. As a result, the forensic diagnosis and initiation of protective intervention are made more difficult. IF abuse constitutes an

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important breach of trust and loss of security in the family, and significantly threatens the child's development.

It is important to analyze the differences between IF and EF abuse, since the two forms of abuse are associated with different types of consequences, thereby justifying the need for tailored strategies of diagnosis and intervention.

The general objective of this study is to better characterize the IF and EF forms of child sexual abuse with the aim of improving their detection and diagnosis, as well as identifying better methods for treatment and protection of the victim.

2. Material and methods

A retrospective study was conducted based on the analysis of medico-legal reports related to complainants under 18 years of age, who were suspected of being sexually abused and were observed in the North Branch of the National Institute of Legal Medicine between 1997 and 2007 ($n = 1054$). Two trained research assistants collected and coded the data.

It was considered that IF abuse was perpetrated by someone in the complainants' family and EF abuse was perpetrated by unrelated individuals, such as strangers, neighbors, teachers, caregivers, and friends.

Excel 2003 was chosen as the database software and SPSS 15 for Windows was used for statistical analysis.

The *Q squared* test was used in the comparison of variable categories (to verify the independence and non-existent relationship between two variables). Contingency tables were used to study the relationship between two variable categories. For continuous variables, a Student *t*-test was used. A significance level of 5% was considered significant.

3. Results

The selected cases corresponded to 54% of the total suspected cases of sexual crimes observed during the studied time period, independent of the complainants' age.

The results revealed that 59.8% ($n = 630$) of the suspected abuses were EF and 40.2% ($n = 424$) were IF. There were no differences in the distribution of these cases along the studied period.

3.1. Characterization of the complainant

Most complainants were female ($n = 860$; 81.6%). The average female age was 10.8 years (Min = 0.4; Max = 17.9; SD = 4.4), while the average age of males was younger (median = 9.2, compared to 12.3 in the females – Mann–Whitney test); there were no differences in gender distribution within the analyzed period and no significant differences in complainants gender preference was observed.

With respect to occupational activity, the majority were students ($n = 854$; 77.4%). In a small number of cases, the subjects were already working (four between 12 and 14 years old, and sixteen older than 15 years) (Table 1).

When correlating IF and EF situations, significant differences were confirmed with respect to the complainants' age (younger in IF cases) and activity but these items were linked to age ($p < 0.001$) (Table 1).

3.2. Characterization of the alleged abuser

The majority of alleged abusers were men.

Six cases were perpetrated by women and those were all related to fondling the victim (four mothers, a neighbor and a group of older friends). In one case, there was supportive physical evidence. The complainant was a seven-year-old girl and the alleged abuser

was her mother. The abuse, which was accompanied by verbal threats, occurred at their home and consisted of fondling followed by introducing fingers into the vagina. Some information on a previous abusive episode was present. The child was examined 48 h after the abuse and still displayed evidence of physical abuse.

In the IF cases, the father or stepfather was the alleged abuser in 54% of cases. In EF cases, the majority of abuses (67.9%) were perpetrated by people known to the victim (Table 2).

With regard to prior instances of deviant behavior, it is important to indicate that in 52.4% ($n = 552$) of cases, we were unable to obtain information. In the remainder of cases ($n = 502$), this behavior was identified in 321 (63.9%) cases, and this proportion was much greater in IF cases ($p < 0.001$), especially with respect to the history of previous sexual crimes (Table 2).

3.3. Characterization of the alleged abuse

For cases of abuse that involved multiple practices, only the most intrusive was considered.

In general, the practices most commonly described were fondling ($n = 341$; 32.4%), followed by vaginal and/or anal penetration ($n = 335$; 31.8%) and vaginal penetration attempt ($n = 152$; 14.4%). In 72 cases (6.8%), the children denied abuse and an examination was conducted on the grounds of suspicion, but this was not accompanied by a concrete description of the suspected abuse. In 137 cases (13.0%), the type of abuse was not described by the child or the person accompanying him or her. These cases were characterized by general suspicion, as a result of changes in behavior or other signals (Table 3).

Significant differences were observed between IF and EF abuse in terms of the sexual practices described. The more intrusive

Table 1

Characterization of the victim.

		IF ($n = 424$) n (%)	EF ($n = 630$) n (%)	p
Gender	Female	357 (83)	503 (84.7)	0.07
	Male	67 (17)	127 (15.3)	
Age (years)	Average	9.43	11.7	<0.001
	Min.	0.4	0.5	
	Max.	17.9	17.9	
	SD	4.43	4.08	
Activity	None	123 (28.8)	90 (14.2)	<0.001
	Student	297 (70.2)	518 (82.6)	
	Worker	3 (0.7)	17 (2.7)	
	No information	1 (0.5)	5 (0.5)	

Table 2

Characterization of the abuser.

		IF (<i>n</i> = 424) <i>n</i> (%)	EF (<i>n</i> = 630) <i>n</i> (%)	<i>p</i>
Gender	Male	420 (99.1)	628 (99.7)	0.35
	Female	4 (0.9)	2 (0.3)	
Relationship with victim	Father	190 (44.8)	428 (67.9)	–
	Stepfather	39 (9.2)		
	Other relative	195 (46.0)		
	Friend or neighbor	–		
	Unknown person	–	202 (32.1)	
Previous deviant behavior	Alcoholic	17 (4.0)	5 (0.8)	<0.001
	Drug addiction	3 (0.7)	8 (1.3)	
	Sexual abuse	180 (42.5)	80 (12.7)	
	Delinquent behavior	12 (2.8)	16 (2.5)	
	None	72 (17.0)	109 (17.3)	
	No information	140 (33.0)	412 (65.4)	

Table 3
Characterization of the abuse.

		IF (n = 424) n (%)	EF (n = 630) n (%)	p
Type of abuse	Fondling	194 (45.8)	147 (23.3)	<0.001
	Vaginal penetration by penis or fingers	40 (9.4)	149 (23.7)	
	Vaginal penetration attempt by penis	58 (13.7)	94 (14.9)	
	Anal penetration by penis	20 (4.7)	51 (8.1)	
	Vaginal and anal penetration by penis	22 (5.2)	53 (8.4)	
	Exhibitionism	11 (2.6)	6 (1.0)	
	Abuse denied	26 (6.1)	46 (7.3)	
	No information	53 (12.5)	84 (13.3)	
Place	Victim's and/or abuser's home	332 (78.3)	243 (38.6)	<0.001
	Isolated place	47 (11.1)	249 (39.5)	
	Other	45 (10.6)	138 (21.9)	
Circumstances of occurrence	Verbal threats	143 (33.7)	60 (9.5)	<0.001
	Physical violence	110 (26.0)	216 (34.3)	
	Inducement (sweets or money)	33 (7.8)	66 (10.5)	
	Armed threats	4 (0.9)	48 (7.6)	
	Victim consent	11 (2.6)	82 (13.0)	
	No information	123 (29.0)	158 (25.1)	

physical practices (vaginal and/or anal penetration or penetration attempt) were more frequent in EF cases ($p < 0.001$) (Table 3).

In 575 cases (54.6%), the alleged abuse took place in the complainant's and/or the alleged abuser's home, with this being more frequent in IF cases ($p < 0.001$) (Table 3).

Physical violence and threats were reported in 326 (31.0%) and 255 (24.2%) IF and EF cases, respectively. In 99 cases (9.4%), there may have been enticement with sweets or money and in 93 cases (8.8%), the child "consented" to the sexual practice. With respect to these coercive methods used to commit abuse, verbal threats were found to be more frequent in IF cases, while physical violence and armed threats were found more often in EF cases ($p < 0.001$). The number of cases involving enticement and the "consent" of the child were more frequent in EF cases ($p < 0.001$) and "consent" was often observed in cases between couples who were "having a love affair" (Table 3).

3.4. Characterization of the medico-legal examination

In the majority of cases, medico-legal examination took place more than 72 h after the last abuse ($n = 740$; 70.2%); this group also includes those in which the time elapsed was unknown ($n = 311$; 29.5%). However, in IF abuse, this delay was confirmed in a significant number of cases ($n = 364$; 85.8%) ($p < 0.001$) (Table 4).

The medico-legal examination did not reveal injuries in 70.9% of cases ($n = 748$). In 190 cases (18%), there were sequelae suggesting non-recent sexual practices and in 116 cases (11%), acute injuries were present from recent abusive episodes. In EF abuse, no injury was observed in 64.8% of cases, while trace injuries suggesting non-recent vaginal penetration were observed in 17.5% of cases. In 80.2% of IF cases, no physical signs were observed. With respect to the absence of acute injury (more frequent in the context of IF abuse) and to the evidence of vaginal penetration (more frequent in EF abuse), these differences between the two forms of abuse were significant ($p < 0.001$) (Table 4).

DNA studies were conducted in 151 cases (14.3%), of which 51% were EF cases and 21.9% were IF cases ($p < 0.005$). Of these, 20.9%

Table 4
Characterization of the medico-legal examination.

		IF (n = 424) n (%)	EF (n = 630) n (%)	p
Delay between occurrence and examination	≤3 days	60 (14.1)	254 (40.3%)	<0.001
	>3 ≤ 6 days	33 (7.8)	67 (10.6%)	
	>6 ≤ 30 days	44 (10.4)	61 (9.7%)	
	>30 days	125 (29.5)	99 (15.7%)	
	No information	162 (38.2)	149 (23.7%)	
Signs on physical forensic examination	Without Fondling	340 (80.2)	408 (64.8)	<0.001
	No recent vaginal penetration attempt	23 (5.4)	31 (4.9)	
	No recent anal penetration	13 (3.1)	17 (2.7)	
	Recent anal penetration	8 (1.9)	9 (1.4)	
	Recent vaginal penetration	4 (0.9)	21 (3.3)	
Agreement (information/examination)	No recent vaginal penetration	33 (7.8)	110 (17.5)	0.08
	Recent vaginal penetration	3 (0.7)	34 (5.4)	
	Fondling	11.9%	21.1%	
	Vaginal penetration	58.1%	71.3%	
	Anal penetration	60.0%	58.8%	
	Penetration attempt	22.4%	18.1%	0.70

and 19.7% showed a genetic profile that was different from that of the child in EF and IF cases, respectively.

3.5. Agreement between the description of the abuse and the results of the physical examination

Comparing the description of the abuse taken from the child or her/his representative and the physical findings, the greatest agreement was observed in EF cases where the child was subjected to vaginal penetration (71.3%) (Table 4). However, this agreement was also more than 58% in cases of IF abuse in which there was anal or vaginal penetration (Table 4). There are no statistically significant differences between the two types of abuse for any of the practices (Table 4).

4. Discussion

In Portugal, no existing studies have compared IF and EF abuse. The results of the present study reveal the existence of significant differences between IF and EF cases. IF abuse is characterized by: (a) younger complainants (earlier onset); (b) a closer proximity between complainant and alleged abuser; (c) an alleged abuser with a greater likelihood of having a history of previous sexual crimes; (d) low visibility (committed at home); (e) less physically intrusive practices; (f) a higher level of psychological violence (degree of threatening behavior involved associated with the secrecy); (g) more delay between the last abuse and the medico-legal examination; and (h) fewer physical signs or DNA evidence (none in the great majority of cases).

These differences highlight the fact that IF sexual abuse, although less physical/sexual violent than EF abuse, may be more serious from a psychological perspective, as suggested by other studies.^{1,4,5} Generally, IF abuse involves victims that are younger^{6–8} and closer to the abuser (the father in 45% of these cases). This emotional proximity between the victim and abuser is associated with the greater threat level in IF cases. Additionally, disclosure, on the part of the victim, and detection by a third party

may be more difficult. Also, in most IF cases, the abuse takes place in the secrecy of the home.

These characteristics lead to an important delay in the forensic examination of IF cases, as demonstrated in this study. Another study, also conducted in the medico-legal department of Porto in 1997 shows that this delay did not significantly affect the outcome of most cases because of changes in Portuguese law in 1998 that allowed for medico-legal examination of these cases without judicial direction in order to solve this problem.⁹ Although the speed of professional intervention could be important, the delay in disclosure or reporting these cases may be the primary cause of this problem.

In this manner, the medico-legal examination and possibility of proving abuse are compromised not only by the delay in conducting the examination, but also by the fact that IF abuse tends to be physically less intrusive and more difficult to prove due to the lack of physical signs, as observed by other authors.^{9–11}

In our sample of 314 cases (29.8%), the examination was performed less than 72 h after the abuse, which also makes DNA comparison studies much more difficult, if not impossible. We chose this time frame according to the recommendations of the American Academy of Pediatrics.¹² In many cases, the type of practice suspected does not justify a search for semen or sperm, and this may also account for the low rate of DNA studies performed (14%). Since EF victims are observed sooner and the sexual practices are more intrusive, DNA studies were performed principally in this group ($p < 0.005$). In cases where DNA studies were conducted, we observed a genetic profile different from that of the victim. In two cases, DNA was detected in anal swabs from male victims under 10 years of age (6 and 9 years, one in IF context), 9 and 24 h, respectively, after the abuse. This may not be in accord with others studies, such as that of Christian et al.¹³, who observed that no paediatrics swabs were positive more than 13 h after an acute incident, or with some authors who consider that only in acute assault and in victims older than 10 years¹⁴ should doctors collect forensic evidence such as semen or sperm. In other cases, they were only identified on clothing or objects.^{10,14} In spite of these results, there is still a great expectation that a physical examination will result in evidence that abuse either has or has not occurred.

However, as we have seen, the absence of physical signs or DNA evidence is sometimes a result of delayed presentation to the forensic examination. In many cases, the abuser is known to the child and physical injury is not intended. The type of abuse may be chosen to give sexual pleasure to the abuser but to leave little or no injury and the healing of ano-genital injuries may occur rapidly.

Hence, the absence of physical signs or DNA evidence does not imply absence of abuse¹¹ and, in these cases, the medical diagnosis of sexual abuse should be based on the history with a clear statement by the victim^{11,12} and on a psychological and social assessment of the caregivers, the abuser and the family. At least in IF cases, there must be a systematic forensic psychological examination of the child to evaluate both the verbal and non-verbal information, as well as the validity of the testimony, which also counts as valuable evidence for various professionals who intervene in these cases, including the judicial system. However, we must be cautious with validation of this type of proof, as it will only be reliable if the child's information is spontaneous and uncontaminated.¹⁰

This does not mean that physical examination does not remain important, as the child's statement may be supported by physically positive signs (injuries, sexual transmitted infections or DNA evidence) and the correct interpretation of these signs may significantly affect the judgment.^{11,12}

Finally, it must be emphasized that existing references to the absence of differences in the degrees of seriousness in IF and EF

abuse¹⁵ should not affect the validity of these results. Given the existence of socio-cultural factors that can influence this kind of phenomenon, a study conducted in a set community cannot be applied to another, even within the same country.

It seems clear that IF abuse deserves particular attention on the part of the scientific community, as it is certain that exposure of these practices is adversely affected by the phenomenon of concealment.¹⁶ It does not seem strange that a large number of studies demonstrate a greater incidence of EF abuse relative to IF, as this study has confirmed.

Thus, it is of fundamental importance to consider the social and legal concerns about the detection and protection of these victims. Also, we must consider the systematic denouncement of all cases where there are grounds for suspicion on the opinion of different professionals, as Portuguese penal law prescribes, so that the case may be investigated and, if proved, the victim can be protected and treated as soon as possible. According to Portuguese law, when professionals suspect sexual abuse in children, it is mandatory to report this information to the public prosecutor (directly or through the police or the legal medicine services). Failure to report a suspected case can place a child at risk for a more serious occurrence.¹⁷

In these cases, the medical and psychological forensic examination of victims in Portugal is a competence of the National Institute of Legal Medicine (*Law 45/2004 of 19 August*), as a guarantee of a trained and skilled intervention and the legal validity of the proof. This type of forensic intervention is supported by other authors^{18–20} because the forensic doctor may be less vulnerable to the conflict of interests that arises when a doctor working therapeutically with a victim and his/her family is asked to give a forensic opinion on causation.¹⁰

5. Conclusions

The results of our study emphasize the importance of:

- (a) Reporting suspected sexual abuse, especially in IF cases, where disclosure by the child is most difficult and there is less visibility.
- (b) Performing the medico-legal examination as soon as possible after the abusive episode to improve the chance of finding supportive signs, even until the psychological investigation has been completed.
- (c) Combining all aspects of acquired data, such as the examination physical findings, laboratory studies (when indicated) and detailed information resulting from the psychological investigation (particularly from children themselves), to reach a comprehensive diagnosis.

These aspects are important for all cases of sexual abuse, but particularly for IF cases, where the results reveal significant differences relative to EF cases. IF abuse includes, mostly: (a) younger victims; (b) abusers with a history of previous sexual crimes; (c) low visibility (committed at home); (d) less physically intrusive practices; (e) more emotional violence; (f) more delay between the last abuse and the medico-legal examination; and (g) fewer physical signs or trace evidence (none in the great majority of cases).

Although IF sexual abuse tends to be less physically violent than EF abuse, it may more psychologically harmful since it involves victims that are younger and closer to the abuser. This emotional proximity between the victim and abuser and the high threat level make disclosure from the victim and detection by a third party more difficult. These facts promote an important delay in the medico-legal examination of IF cases, as demonstrated in this study.

This medico-legal examination and the possibility of proving abuse are impaired by this delay and the fact that the practices associated with IF abuse are physically less intrusive and, therefore, more difficult to prove due to the lack of physical signs or DNA evidence.

IF abuse deserves particular attention because the issues associated with IF abuse make the disclosure and diagnoses of cases more difficult and complex. To reduce these difficulties, it is necessary to perform the medical examination and a systematic forensic psychological examination as soon as possible. Thus, it is of fundamental importance that a systematic report in all cases is reviewed by the appropriate body so that cases can be investigated and, if proven, the victim can be protected as soon as possible.

Conflict of Interest

We confirm that the material presented in this manuscript is original and has been submitted solely to this journal, and has been prepared in accordance with the instructions given.

We, also, confirm that all authors have seen and approved the submitted version of the manuscript and had full access to all of the data in this study.

We confirm that all research has been carried out in accordance with legal requirements of the study field.

Finally, we also state that neither the author or any of the co-author have any potential conflict of interests related to the publication of this paper.

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Ethical Approval

This study has been carried out in accordance with ethical rules and it has not been submitted to Ethical Approval because it is a retrospective study based on medical reports and no identification of the individuals was given.

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